Chapter 5

AIR QUALITY

- **Introduction and Overview**
- **Objectives of the Air Quality Chapter**
- **Institutional Air Quality Relationships in the Region**
- **Air Quality Standards and Attainment Status**
- **Air Quality Planning Requirements**
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A. INTRODUCTION AND OVERVIEW

This chapter neither replaces nor modifies the air plans adopted within the region, but rather, it sets the policy context in which SCAG participates in and responds to these plans and their implementation.

Air quality has played a pivotal role in the SCAG region. Significant effort has gone into meeting the challenge of aggressively educating the public on the impacts of poor air quality, regulating a myriad of sources to reduce air pollutant emissions, and encouraging technology-based air quality improvements. Throughout this effort, there

has also been a strong consciousness of the role that air quality has on economic vitality - through the opportunities new technologies present, the desire of both the public and businesses to locate in healthful places, and the need to maintain a strong yet flexible regulatory environment.

Because the Chapter discusses SCAG's air quality planning responsibilities and also describes plans and policies developed by regional, state and federal air agencies, this chapter has both core and ancillary portions. The narrative on SCAG's conformity responsibilities, SCAG's statutory role in the development of the South Coast Air Quality Management Plan, and the relationship between transportation and air quality planning are core and are italicized as well as specifically identified as core portions. The descriptions of the various air quality plans and implementation strategies are ancillary.

The chapter describes the institutional relationships within the region relevant to air quality planning and implementation. It also summarizes pertinent information from the adopted air plans in terms of attainment status, objectives and implementation strategies. In addition, the chapter identifies strategic air quality issues affecting the region:

1. Planning and Regulatory Streamlining

- Simplification of the State Implementation Plan (SIP) development and approval processes
- Potential freight movement impacts and changing air standards
- *Managing the conformity process (CORE)*
- Streamlining air district regulations and requirements
- Alternatives to command and control regulation

2. Supporting Plan Implementation of Transportation Related Measures

- Development and implementation of technologies
- Accelerated vehicle retirement (scrapping)
- *Transportation infrastructure and program control measures (CORE)*
- *Employer rideshare programs (CORE)*

3. Clean Air and Economic Prosperity

- Improving air quality and the economy
- *Air quality, land use, transportation and economic relationships (CORE)*

4. Supporting Technological Advancement

- *Development and implementation of advanced technologies (CORE)*
- Public/Private partnerships as an implementation strategy

5. Reducing Exposure to Pollution from Inter- and Intra-basin Transport of Pollutants

The chapter has been written to support the goals of the Regional Comprehensive Plan and Guide (RCPG). It facilitates an improved standard of living by encouraging sustained economic growth, through presenting of both

air quality and the economic considerations; and through the creation of new industries and products required to achieve cleaner air; it provides for a better quality of life by enhancing/maintaining air quality, *and by fostering the provision of adequate transportation for all residents while meeting clean air goals (CORE);* and it promotes ***equity*** by supporting reducing exposure to pollution for all groups.

B. OBJECTIVES OF THE AIR QUALITY CHAPTER

The objectives of the Air Quality Chapter are to:

- Explain the institutional air quality relationships in the region
- Provide an overview of the status of air quality planning in the region
- Provide policy makers with an overview of the strategic policy issues facing the region
- Identify potential actions to address the policy issues identified

C. INSTITUTIONAL AIR QUALITY RELATIONSHIPS IN THE SCAG REGION

1. The Region's Air Basins and Air Quality Districts

The California Air Resources Board (CARB) has divided the state into air basins based on similar meteorological and geographic conditions, and, to the extent feasible, political boundary lines. The three air basins in the SCAG region are the:

- South Coast Air Basin (SCAB), wholly within the jurisdiction of the South Coast Air Quality Management District (SCAQMD);
- South Central Coast Air Basin (SCCAB), partially the responsibility of the Ventura County Air Pollution Control District (VCAPCD); and
- Southeast Desert Air Basin (SEDAB), of which the SCAQMD, the Mojave Desert Air Quality Management District and the Imperial County Air Pollution Control District each administer a portion in the region.

The four air districts in the SCAG region are:

- South Coast Air Quality Management District (SCAQMD).
- Ventura County Air Pollution Control District (VCAPCD).

- Mojave Desert Air Quality Management District (MDAQMD)—formerly the San Bernardino County Air Pollution Control District (SBCAPCD).
- Imperial County Air Pollution Control District (ICAPCD).

The locations and relationships of the four air districts and the three air basins in the SCAG region are shown in Figure 5-1.

2. ROLES AND RESPONSIBILITIES IN AIR QUALITY PLANNING

a. SCAG

Each state must adopt a plan for implementation, maintenance, and enforcement of primary and secondary national ambient air quality standards in each air quality control region of the state. This plan is the State Implementation plan (or "SIP"). The requirements and status of the SIP for California are codified at 40 CFR 52.220 et seq. Under Section 174(a) of the Federal Clean Air Act (FCAA)[1], the State Implementation Plan must be prepared by an organization certified by the State, in consultation with elected officials of local governments and in accordance with the determination made by state and local elected officials allocating responsibility for developing, adopting, and implementing the elements of the Plan among the State, local governments, and regional agencies. This organization must include, among other parties, elected officials of local governments in the affected area, and representatives of the State air quality planning agency, the State transportation planning agency, and the metropolitan planning organization (MPO)[2] designated to conduct the continuing, cooperative and comprehensive ("3-C") transportation planning process for the area under 23 U.S.C. §134.

Additionally, Section 174(b) of the Clean Air Act[3] requires that the preparation of the SIP and subsequent revisions be coordinated with the 3-C planning process mandated by ISTEA. As the designated MPO for nine urbanized areas centering around the greater Los Angeles Metropolitan Area, SCAG is responsible for the 3-C planning process. (CORE)

b. Air Districts. Each of the air districts is responsible for: (1) preparing both state and federal air quality plans to demonstrate attainment of ambient air quality standards; (2) promulgating and enforcing rules and regulations which affect both stationary sources and mobile sources, as well as facilitating regulatory compliance among affected sources.

c. The California Air Resources Board (CARB). The California Air Resources Board (CARB) has the responsibility to ensure that the state clean air requirements are adhered to and that statewide programs to reduce end of tailpipe emissions from mobile sources are implemented. Inspection and maintenance of passenger vehicles, statewide low emission/zero-emission vehicle mandates, and fleet average standards are examples of such programs[4]. CARB, in cooperation with the local air districts, has the responsibility of assessing and addressing transport of emissions between air basins.[5]

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[1] *42 U.S.C. §7504(a). Federal guidelines for implementing §174 of the Clean Air Act can be found in Appendix U to 40 C.F.R. §51.*

[2] *As defined by federal regulations, a "metropolitan planning organization" (MPO) is the organization designated by the Governor and local elected officials as responsible, together with the State, for transportation planning in an urbanized area. The MPO serves as the forum for cooperative decisionmaking by the principal elected officials of general purpose local governments. SCAG is the designated MPO for purposes of the Intermodal Surface Transportation Efficiency Act (ISTEA) found at 23 U.S.C. §§101 et seq.*

[3] *42 U.S.C. §7504(b).*

[4] Cal. Health and Safety Code §40469.

[5] Cal. Health and Safety Code 39610.

d. The U.S. Environmental Protection Agency (EPA). At the federal level, the U.S. Environmental Protection Agency is responsible for ensuring that air quality requirements are met. Review and approval of State Implementation Plans, adoption of rules and regulations, and promulgation of national standards (e.g., airplane engine standards) are all within EPA's purview.

3. ROLE OF SCAG WITH RESPECT TO OTHER AGENCIES IN PREPARING ATTAINMENT PLANS.

1. Attainment Plans

The SIP is comprised of **attainment plans** which are prepared by the air quality management and air pollution control districts. In each district, attainment plans are prepared for individual air pollutants (e.g., ozone or carbon monoxide). Following approval of the attainment plans by the California Air Resources Board (CARB), the SIP is sent to the federal EPA for promulgation. Deadlines for submittal of the various attainment plans can be found in the preamble to the 1990 FCAA amendments[6]

2. Air Quality Management Plans (AQMPs).

a. South Coast AQMP. The South Coast District Board must adopt a plan for achieving and maintaining the state and federal ambient air quality standards for the South Coast Air Basin. Upon adoption by the State Air Resources Board, the plan and its future revisions will constitute the District's air quality management plan, and, as submitted to the Environmental Protection Agency, the State Implementation Plan for the South Coast Air Basin.

SCAG is responsible for preparing and approving the portions of the plan which relate to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, control measures, and strategies[7] (CORE).

In the course of preparing and approving these elements of the Air Plan, SCAG coordinates the efforts of counties and cities which are themselves developing and reviewing plan elements to meet the requirements of the plan, state and federal law, and local needs[8] (CORE).

Additionally, SCAG must **analyze and provide emissions data** related to its planning responsibilities[9].

SCAG's role in resolving disputes over key elements. Before the plan is formally submitted to the State Air

[6] 40 C.F.R. §52.

[7] *Cal. Health & Safety Code §40460(b).*

[8] *Cal. Health & Safety Code §40464.*

[9] Cal. Health & Safety Code §40460(b).

Resources Board (CARB), SCAG, CARB, and the District board meet to discuss key portions of the plan which SCAG had responsibility for developing. SCAG and the two boards work together to resolve any differences on these portions of the plan[10][11].

Revision of the Plan. The plan must be formally revised every two years (beginning in 1982) by the agencies responsible for preparing plan revisions. Where the plan is revised, compliance schedules and emission limitations must be updated[12].

SCAG must actively participate in establishing a South Coast Air Basin emission carrying capacity for each formal review of the plan. A carrying capacity is the maximum level of emissions which would enable the attainment and maintenance of an ambient air quality standard for a pollutant[13]. These capacities must be updated to reflect new data and modeling results[14]. CARB must review and comment on the emission carrying capacity, air quality model selection, and other such data. SCAG and the District Board must consider CARB's comments and recommendations. If CARB's recommendations are not accepted, CARB must convene a conflict resolution committee which includes two members of SCAG's governing body[15] (CORE).

The Regional Mobile Source Review Committee. *SCAG also sends a representative to the regional Mobile Source Air Pollution Reduction Review Committee (MSRC)[16] (CORE).* The MSRC develops and adopts a work program - a set of projects designed to reduce emissions from mobile sources.

b. AQMPs for the Ventura, Mojave and Imperial Air Districts.

SCAG has a less extensive role in the preparation of the AQMPs for these Districts.

Participation in triennial review of ozone plan for Ventura County APCD. California law requires the Ventura County APCD to undertake a triennial review and revision of its plans for ozone non-attainment areas[17]. By December 31, 1995, or 180 days from the operative date of Cal. Health & Safety Code Section 40927, the VCAPCD must do all of the following *in consultation with SCAG and after*

[10] Cal. Health & Safety Code §§40467, 40470.

[11] Review of the Plan by CARB. After the plan is submitted, CARB examines it to determine whether it complies with state and federal requirements. CARB adopts and submits to EPA those portions of the plan which it determines to be in compliance with state and federal law and which it determines to be adequate to attain state ambient air quality standards. Cal. Health & Safety Code §40469(a). If CARB determines that a portion of the plan does not meet these conditions and requirements, CARB must, before amending the plan, convene a committee which includes two members from the Executive Committee of the SCAG Regional Council. The committee, which must also include representatives from the state board and the South Coast District Board, will attempt to resolve any problems. Cal. Health & Safety Code §40469(b).

[12] Cal. Health & Safety Code §40463(a).

[13] *Cal. Health & Safety Code §40463(b).*

[14] *Cal. Health & Safety Code §40463(c).*

[15] *Cal. Health & Safety Code §40463(d).*

[16] *Cal. Health & Safety Code §44244(a)(2).*

[17] Cal. Health & Safety Code §40927.

public notice and comment (CORE): (1) Estimate for the district and for the calendar year following the operative date of Health & Safety Code Section 40927, the total emissions of ozone precursor chemicals from motor vehicles in the district, vehicle miles traveled, and average pollution miles per vehicle[18]; (2) Determine, *in consultation with SCAG (CORE),* the VCAPCD must the target pollution miles for each motor vehicle in the district for each of the next for calendar years. For the first of those four calendar years, the target pollution miles per vehicle for a 12-month period shall be set at a level so that 90% of the vehicles have target pollution miles below the threshold[19]; and (3) Reduce the total target pollution miles for all motor vehicles combined in the district by 5% per year until the district attains the state ambient air quality standard for ozone, or until the conclusion of the pilot program established pursuant to Section 43705(b) of the Health and Safety Code[20];

Additionally, the Ventura, Mojave, or Imperial Air Districts may, if they so wish, contract with SCAG to jointly develop the plan for Transportation Control Measures[21]. The District may finance the agreement with taxes on motor vehicles registered within the District[22].

4. SCAG's conformity mandates

A. *Generally : The importance of conformity. Section 176(c)(1) of the FCAA[23] provides in part that "no department, agency or instrumentality of the Federal government may engage in, support, or approve any activity which does not conform to a SIP which is composed of the SIP submittals prepared by the South Coast Air Quality Management District, the Ventura County Air Pollution Control District, the Mojave Desert Air Quality Management District, and the Imperial County Air Pollution Control District] approved under 42 U.S.C. §7410," and that no Metropolitan Planning Organization (SCAG) may "approve any project, program or plan not conforming to an implementation plan. In November of 1993, EPA significantly strengthened its conformity regulations[24] and added a requirement for the adoption of state conformity procedures by November 1994. The FCAA and the new conformity regulations provide that no project, plan, program or other action may be approved by the Federal Government or by SCAG unless it conforms to the adopted SIP composed of the SIP submittals prepared by local air districts. According to Section 176(c), a determination of conformity must be based on the most recent estimates of emissions, which in turn must be derived from current population, employment, travel and congestion estimates made by SCAG. (CORE)*

1. When does an action "conform" to the SIP? The basic criteria for "conformity" to the SIP are set forth in

[18]Cal. Health & Safety Code §40927(a)(1).
[19]Cal. Health & Safety Code §40927(a)(2).
[20]Cal. Health & Safety Code §40927(a)(3).
[21]Cal. Health & Safety Code §40717(b).
[22]Cal. Health & Safety Code §§44223, 44225, 44237.
[23]*42 U.S.C. §7506(c)(1).*
[24]*The new transportation conformity regulations are found at 40 C.F.R. §51.*

Section 176(c)(1) of the Clean Air Act[25]. This section states that an action conforms to the SIP if (1) it conforms to the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQSs and (2) the activity will neither cause or contribute to any new violation of any emissions standard in any area; increase the frequency or severity of any existing violation of any standard in any area; nor delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. (CORE)

B. <u>SCAG's role in conformity determinations</u>.

1. Determinations are based on demographics from SCAG. (CORE)

2. SCAG is responsible for conducting particular conformity analyses. SCAG is involved in making conformity determinations for two types of activities: Transportation activities and general federal (non-transportation) actions.

a. Transportation activities : SCAG cannot approve Regional Transportation Plan (RTP) or Regional Transportation Improvement Program (RTIP) unless it finds that RTP and RTIP conform to SIP. The RTIP is the region's comprehensive spending program for transportation improvements.

1) Generally. Section 176(c) of the Clean Air Act[26] requires the Regional Transportation Plan (RTP) and the RTIP developed by SCAG pursuant to ISTEA[27] to implement the transportation provisions of any SIP applicable to all or part of the area covered by the RTP or RTIP.

2) Final determinations re conformity of RTP, TIP. Specifically, SCAG may not adopt an RTP or RTIP, or find the RTP or TIP to be in conformity until a final determination has been made that (1) emissions expected from implementation of the RTP or TIP are consistent with estimates of emissions from motor vehicles contained in the applicable SIP; and (2) that the RTP or TIP will not violate any of the three criteria for conformity listed in Section I(A), above[28].

3) Implementation of Transportation Control Measures (TCMs). SCAG may not adopt or approve a TIP until it determines that the TIP provides for timely implementation of TCMs consistent with schedules included in the SIP[29].

4) Conformity determinations re project approval. Although certain types of projects (listed at 40 C.F.R. §51.460) are exempt from conformity review, SCAG generally may not adopt or approve a transportation project or find the project to conform to the SIP unless either (1a) the project comes from a conforming plan and program; (1b) the design concept and scope of the project have not changed significantly since the conformity finding regarding the plan and program from which the

[25] *42 U.S.C. §7506(c)(1).*
[26] *42 U.S.C. §7506(c).*

[27] *23 U.S.C. §§101 et seq.*
[28] *42 U.S.C. §7506(c)(2)(A).*
[29] *42 U.S.C. §7506(c)(2)(B).*

project derived was made; and (1c) the design concept and scope of the project at the time of the conformity determination for the program was adequate to determine its emissions, or (2) the projected emissions from the project, when considered together with emissions projected for the conforming transportation plans and programs within the nonattainment area, do not cause those plans and programs to exceed their assigned emissions reduction projections and schedules in the SIP[30].

5) SCAG must consult with other agencies re conformity issues. Before a SIP revision is approved by the EPA, SCAG must, before making conformity determinations, provide a reasonable opportunity for consultation with local, state, and Federal air and transportation agencies on a number of issues[31]*. These issues include (1) evaluation and choice of models to be used in hot-spot and regional emissions analysis; (2) which transportation projects should be considered "regionally significant" for purposes of regional emissions analysis; and (3) which projects should be considered to have undergone significant changes in design concept and scope.*

SCAG has entered into MOUs with the appropriate federal, state, and local agencies which set forth procedures for meeting these interagency consultation requirements. MOUs have already been signed for the portions of the region under the jurisdictions of the South Coast Air Quality Management District (SCAQMD) and the Ventura County Air Pollution Control District (VCAPCD), and MOUs for other parts of the region are currently under negotiation.

Two standing committees, SCAG's Transportation Conformity Working Group and the Modeling Task Force.

The Transportation Conformity Working Group ("Working Group") functions as a forum for interagency consultation which offers advice to the Policy and Standing Committees of the SCAG Regional Council. The general purpose of the Working Group is to review and recommend procedures for conformity determinations for plans and programs in the SCAG region before these conformity determinations have been made by SCAG. To this end, the Working Group reviews issues relating to development of the Regional Transportation Plan and the Regional Transportation Improvement Program. The Working Group also provides the Regional Council committees with technical input and consultation throughout the planning process.

Before SCAG makes its conformity determinations, the Modeling Task Force reviews technical decisions concerning the development and application of the regional transportation model to travel forecasting and to analysis of the transportation impacts on air quality, including emissions analysis, emissions factors and associated planning assumptions. These assumptions include socioeconomic data, vehicle miles traveled (VMT), and temperature.

The membership and specific responsibilities of the Working Group and of the Task Force are set forth in the interagency consultation MOUs described above. (CORE)

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[30] *42 U.S.C. §7506(c)(2)(C).*

[31] *40 C.F.R. §51.402.*

b. Conformity for general federal actions. A "general federal action" is any activity engaged in, supported, or allowed by the Federal Government other than transportation plans, programs and projects developed, funded or approved under Title 23 of the United States Code. Although the Federal Government, rather than SCAG, is primarily responsible for making conformity determinations for general federal actions, their conformity analyses must be based on the latest planning assumptions derived from population, employment, travel and congestion estimates approved by SCAG[32]. Any revisions to these estimates used as part of the conformity determination must be approved by SCAG[33]. Additionally, a Federal agency making a conformity determination for a general federal action must notify SCAG after making its draft and final conformity determination on the action[34].(CORE)

3. Potential impact of citizen suits on conformity. Under Section 304(a)(2) of the FCAA[35], conformity determinations may be challenged by citizen suits. When done correctly, conformity analysis is a very complex and expensive process, and plaintiffs in areas around the country have attempted to stop transportation projects by filing citizen suits alleging that the conformity analysis done for the projects was superficial or otherwise improperly done. In the Bay Area, plaintiffs were successful in stopping several projects for which conformity analysis had not been properly performed[36]. In the SCAG region, citizens opposing the San Joaquin Corridor project challenged the conformity finding, claiming that modeling done by SCAG did not use the correct design and scope for the project corridor. SCAG successfully defended its procedures, and the court validated the conformity findings[37]. (CORE)

Withholding transportation funds by the federal government - either through lapsing of a conformity finding or through the imposition of sanctions - presents the potential for significant adverse economic effects to the region because of lost or delayed opportunities for transportation investments. Varying air plan submittal timelines and approval cycles combined with differing penalty time frames frequently obscure the status of penalty imposition. (CORE)

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[32] *40 C.F.R. §51.859(a).*

[33] *40 C.F.R. §51.859(a)(2).*

[34] *40 C.F.R. §51.855(a),(b).*

[35] *42 U.S.C. §7604(a)(2).*

[36] *Citizens for a Better Environment v. Deukmejian; Sierra Club v. MTC, 731 F. Supp. 1448 District Court 89-2044 TEH, C89-2064 TEH (1990).*

[37] *Laguna Greenbelt, Inc. v. U.S. Department of Transportation, U.S. District SACV 93-499 LHM (C.D. Cal). In this case, the District Court also found for the defendants with both respect to challenges made against the Environmental Impact Statement (EIS) which they had prepared for the project and with respect to issues regarding endangered species. The plaintiffs appealed the environmental holdings but chose not to further challenge SCAG's conformity findings. The defendants prevailed on appeal.*

D. AIR QUALITY STANDARDS AND ATTAINMENT STATUS

Air quality planning in the region is directed at meeting ambient air standards set by the federal Environmental Protection Agency (EPA) and the CARB. Each plan developed by the air districts and CARB is designed to meet ambient air quality standards by the deadlines specified in the FCAA[38] and emission reduction targets of the California Clean Air Act (CCAA)[39]. These acts base the extent of required emissions reductions and the length of time to attain standards on the severity of a district's pollution.

Federal and state ambient air standards are set at levels to protect the health of the most sensitive population groups, particularly the elderly, children, and people with respiratory diseases. State standards are more restrictive than federal standards. There are federal and state standards for six pollutants and state standards for three others. Four pollutants, Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}), exceed federal and state standards in one or more districts in the region. The standards for these four pollutants are shown on Table 5-1.

TABLE 5-1
AMBIENT AIR QUALITY STANDARDS

CALIFORNIA		FEDERAL	
Air Pollutant	**Standard**	**Primary**	**Secondary**
Ozone	>0.09 ppm, 1-hr avg	>0.12 ppm, 1-hr avg.	0.12 ppm, 1-hr avg.
Carbon Monoxide	>9.0 ppm, 8-hr. avg. >20 ppm. 1-hr. avg.	≥9 ppm, 8-hr. avg. >35 ppm, 1-hr. avg.	≥9 ppm, 8-hr. avg. >35 ppm, 1-hr. avg.
Nitrogen Dioxide	>0.25 ppm, 1-hr. avg.	>0.053 ppm, annual avg.	>0.053 ppm, annual avg.
Suspended Particulate Matter (PM 10)	>50 ug/m^3, 24-hr. avg. >30 ug/m^3 annual geometric mean	>150 ug/m^3, 24-hr avg. >50 ug/m^3 annual arithmetic mean	>150 ug/m^3, 24-hr avg.; >50 ug/m^3 annual arithmetic mean

Note: ppm = parts per million by volume
ug/m^3 = micrograms per cubic meter
> = greater than
≥ = greater than or equal to

Source: South Coast Air Quality Management District 1994.

The attainment status of state and federal air pollution standards and the time frames for achieving the standards in each planning area are shown on Table 5-2. The divides the nation into five categories for ozone attainment planning purposes[40], with increasingly longer deadlines for bringing the most severely polluted areas into compliance with the federal standard. The South Coast Air Basin is the only area in the nation in the "extreme" category for ozone. In California, the CCAA creates four categories of non-attainment based on ozone concentrations[41]. Although the CCAA is more stringent and requires five percent annual reductions in ozone precursor emissions, the act does not set attainment deadlines and contains no financial penalties for failing to meet its requirements, however, air districts must provide alternative air quality indicators and implement

[38] 42 U.S.C. §§7401 et seq.

[39] Cal. Health & Safety Code §§40910 et seq.

[40] 42 U.S.C. §7511(a)

[41] Cal. Health & Safety Code §§ 40918-40920.5, 40921.5.

measures as expeditiously as possible. The FCAA sets attainment deadlines based on the severity of a basin's air pollution and contains sanctions for failure to comply with various requirements of the Act[42], as spelled out in guidelines issued by EPA[43]. Both Acts specify the type of controls that are mandatory and those that are optional for regions to meet air quality standards[44].

Among the measures prescribed by the FCAA are "Transportation Control Measures" (TCMs) relating to criteria pollutants and their precursors. State law defines the term "Transportation Control Measures" as strategies designed to reduce vehicle trips, use, miles traveled, idling, or traffic congestion for the purpose of reducing motor vehicle emissions[45]. Section 108(f)(1)(A) of the FCAA[46] sets forth a nonexhaustive list of sixteen types of TCMs. These include restriction of certain toads or lanes for passenger buses or high-occupancy vehicles[47]; programs for the provision of rideshare services[48]; and employer-sponsored programs to permit flexible work schedules[49]. To meet the requirements of the FCAA, TCMs must be quantifiable, enforceable, replicable, and accountable. Additionally, in order for SCAG to make its conformity findings, the region must demonstrate that TCMs are being implemented in a timely manner[50]. *As described above, SCAG is responsible for preparation of TCMs in the South Coast Air Basin. (CORE)*

[42]Under Section 179(b)(1)(B) of the Federal Clean Air Act [42 U.S.C. §7509(b)(1)(B)], sanctions may include a prohibition on approval of transportation projects.

[43]40 C.F.R. §51.448.

[44]42 U.S.C. §7408; Cal. Health & Safety Code §§40918-40922.

[45]Cal. Health & Safety Code §40717(g).

[46]42 U.S.C. §7408(f)(1)(A).

[47]42 U.S.C. §7408(f)(1)(A)(ii).

[48]42 U.S.C. §7408(f)(1)(A)(viii).

[49]42 U.S.C. §6408(f)(1)(A)(xiii).

[50]23 C.F.R. §450.324(d).

TABLE 5-2
FEDERAL AND CALIFORNIA AIR QUALITY ATTAINMENT STATUS
BY POLLUTANT

AIR BASIN AND COUNTY	OZONE		CARBON MONOXIDE		PM10	2SO2	NO2	SULFATES	LEAD	H2S	VISIBILITY
	Fed.	State	Fed.	State	Fed./State	Fed./State	Fed./State	State	Fed./State	State	State
SOUTH COAST AIR BASIN											
Orange, Los Angeles San Bernardino, Riverside (SCAQMD)	Extreme 2010[1]	Extreme	Serious 2000[1]	Serious	Serious 2006*[1]	A	NA 1995	NA	A	Unc.	Unc.
SOUTH CENTRAL AIR BASIN											
Ventura (VCAPCD)	Severe 2005[1]	Severe	A	A	A/NA	A	A	A	A	Unc.	Unc.
SOUTHEAST DESERT AIR BASIN											
W. San Bernardino Desert (MDAQMD)	Severe 2007[1]	Moderate	Unc./A	A	NA/NA	Unc./A	A	NA	A	Unc.[2]	Unc.
Imperial (ICAPCD)	Transi-tional	Moderate	Unc./A	A	Moderate/NA	A	A	A	A	Unc.	Unc.
Coachella Valley (SCAQMD)	Severe 2007[1]	Extreme	Unc./A	A	Moderate/NA	A	A	A	A	Unc.	Unc.
Antelope Valley (SCAQMD)	Severe 2007[1]	Extreme	Unc./A	A	A/NA	A	A	A	A	Unc.	Unc.
E. Riverside Desert (SCAQMD)	Severe 2007[1]	Extreme	Unc./A	A	A/NA	Unc./A	A	A	A	Unc.	Unc.
E. San Bernardino Desert (MDAQMD)	Unc./A	Moderate	Unc./A	A	NA/NA	Unc./A	A	A	A	Unc.	Unc.

1 Year by which federal ozone standard must be met.
2 Area in northwest San Bernardino County designated as non-attainment hydrogen sulfide area only.
3 Moderate for the Searles Valley area, Attainment for the balance of the basin area.
** Five year extension*
A = Attainment
NA = Non Attainment
Unc = Unclassified

E. AIR QUALITY PLANNING REQUIREMENTS

Both the FCAA Amendments and the CCAA are intended to protect public health. Both acts contain within them a list of requirements that are accompanied by rules, regulations, procedures and guidance which seek to more clearly delineate the compliance process. Federal compliance requires: ensuring implementation of all reasonably available measures; documenting reasonable further progress; updating emissions inventories; inclusion of TCMs for serious, severe and extreme nonattainment areas; and development, adoption, and updating pollutant specific attainment plans for Particulate Matter less than ten microns in size (PM10), Nitrogen Dioxide, Carbon Monoxide, Ozone.

In addition to fixed ozone attainment deadlines of 2005 and 2007 for severe areas, and 2010 for extreme areas, the FCAA requires TCMs that offset increased emissions from growth in vehicle trips and miles traveled, and trip reduction programs for employers of 100 or more employees to increase average vehicle ridership (AVR) by at

least 25 percent over existing AVR. The federal Act requires fifteen percent reduction in VOC for the first six years beginning in 1990, and a three percent annual reduction in VOC emissions thereafter. In extreme areas (i.e., the South Coast Air Basin), Section 182(e)(5)[51] of the FCAA permits the use of developing technologies as part of the attainment strategy. Contingency measures must, however, be provided three years prior to ensure that attainment can be reached if the technologies are not realized as anticipated.

In contrast, the CCAA sets five percent annual reductions from 1987 emissions as its target. In addition, the CCAA requires the following: reduced population exposure to criteria pollutants; earliest practicable achievement of standards; increase average commuter ridership to 1.5 persons per vehicle during commute hours by 1999 (in severe and extreme non-attainment areas); substantial decrease in growth in passenger vehicle trips and Vehicle Miles Travelled (VMT) (in serious, severe and extreme non-attainments areas); no net increase in mobile source emissions after 1997 in severe and extreme non-attainment areas; cost effectiveness of control measures must be documented; and public acceptability may be considered as a factor for TCMs. Both federal and state acts require monitoring procedures for compliance and effectiveness. Initial air quality plans to demonstrate attainment of ozone, oxides of nitrogen, and sulfur dioxide were developed in 1991 and are required to be updated every three years.

F. AIR QUALITY PLANS

The current status of SCAG, air district, CARB and EPA approval of the air plans and the applicable SIPs for attainment of federal standards are shown in Table 5-3[52]. The table points to the plethora of plans required at both the federal and state levels, within the region's air basins. It addresses only those versions of plans which are currently applicable or have some standing at local, state and federal levels. Under current state law, air quality management or attainment plans must be amended or adopted by air districts every three years[53], with the next plans due by December 31, 1997 for areas that do not attain standards before 2000. The FCAA requires that specific pollutant attainment plans be adopted and become part of the State Implementation Plan (SIP) on a schedule set forth in the 1990 amendments to the Act.[54] The next federal plan submittals are those for PM10 non-attainment areas and are due by February, 1997.

[51] 42 U.S.C. 7511a(e)(5)

[52] Most recent submittals for the SIP are used in determining conformity of the regional transportation plans and programs.

[53] Cal. Health & Safety Code §40925(a).

[54] These dates are specified in the Preamble to the 1990 Clean Air Act Amendments. The Preamble is codified in 40 C.F.R.§52.

TABLE 5-3
STATUS OF AIR QUALITY PLANS IN SCAG REGION

Air Basin/Plan/District	SCAG Adoption	District Adoption	CARB Approval	EPA Approval
SOUTH COAST AIR BASIN				
1979 Air Quality Mgmt. Plan (SCAQMD)	10/25/79[2]	01/26/79	05/10/79	01/12/83
1989 Air Quality Mgmt. Plan (SCAQMD)	03/17/89[2]	03/17/89	08/15/89	Action had been proposed in 1990
1991 Air Quality Mgmt. Plan (SCAQMD)	06/06/91[2] 08/01/91[2]	07/12/91 08/02/91	10/16/92	NA
1992 Federal Attainment Plan for Carbon Monoxide (SCAQMD)	11/05/92[2]	11/06/92	12/31/92	Proposed partial approval; Renoticed; Not yet acted upon
1992 Federal Attainment Plan for Nitrogen Dioxide (SCAQMD)	06/06/91[2]	04/03/92	05/15/92	
1992 Federal Attainment Plan for Particulate Matter--PM10 (SCAQMD)	06/06/91[2]	07/12/91	11/15/91	
1993 Federal Rate of Progress Plan (15% Plan) (SCAQMD)		11/2/93 12/9/94	11/15/93 12/29/94	Action proposed 10/95 and 4/96
1994 Federal Attainment Plan for Ozone (SCAQMD)	9/1/94	9/9/94	11/15/94	Action proposed 10/95 and 4/96
SOUTH CENTRAL COAST AIR BASIN				
1982 Air Quality Mgmt. Plan or Ventura County (VCAPCD)	[1]	03/23/82	12/31/82	07/30/84
1987 Air Quality Mgmt. Plan (VCAPCD) for Ventura County	[1]	07/26/88	05/12/89	
1991 Air Quality Mgmt. Plan for Ventura County (VCAPCD)	[1]	10/08/91	08/13/92	
1993 Federal Rate of Progress Plan (15% Plan) (Ventura)	[1]	10/19/93 11/8/94	11/15/93 11/15/94	Action proposed 10/95 and 4/96
1994 Federal Attainment Plan for Ozone (Ventura)	[1]	11/8/94	11/15/94	Action proposed 10/95 and 4/96

SOUTHEAST DESERT AIR BASIN				
1979 State Implementation Plan (CARB)	[4]	Not Applicable	11/29/79 02/21/79	7/1/81
1991 Air Quality Attainment Plan for Desert Portion of San Bernardino County (SBCAPCD)	[4]	08/26/91	2/18/93	NA
1991 Air Quality Attainment Plan for Imperial County (ICAPCD)	[4]	04/16/92	2/18/93	NA
1990 State Implementation Plan for PM10 in the Coachella Valley (SCAQMD)	[4]	11/30/90	11/15/91	pending
1991 State Implementation Plan for PM10 for the Searles Valley Planning Area (SBCAPCD, Kern Co. APCD, Great Basin Unified APCD)	[4]	11/25/91	10/28/93	pending
1993 State Implementation Plan for PM10 for Imperial County (ICAPCD)	[4]	11/19/93	2/11/94[5]	pending
1993 Rate of Progress Plan for Mojave (MDAQMD)		3/23/94	3/24/94	Action proposed 10/95 and 4/96
1993 Rate of Progress Plan for Antelope and Coachella Valleys (SCAQMD)		3/11/94 12/9/94	3/24/94 12/29/94	Action proposed 10/95 and 4/96
1994 Federal Attainment Demonstration for Mojave (MDAQMD)		10/26/94	11/15/94	Action proposed 10/95 and 4/96
1994 Federal Attainment Demonstration for Antelope and Coachella Valleys (SCAQMD)		10/6/94	11/15/94	Action proposed 10/95 and 4/96
Federal PM10 Plan Amendments- Searles Valley (MDAQMD)		7/31/95	pending	
Federal Particulate Matter Control Strategy - Mojave Desert (MDAQMD)		7/31/95	pending	

1 SCAG designated as co-lead under federal law, but took no action on Plan.
2 SCAG adopted transportation measures.
3 EPA conditionally approved or fully approved all of the 1979 plan, except for the portions of the ozone and CO plan that pertain to an Inspection and Maintenance program.
4 SCAG and Air District are reviewing roles in discussions with CARB.
5 Partial submittal; attainment demonstration deferred.

The implementation strategies contained in the region's air plans vary greatly by air basin and air district. The South Coast Air Basin has the most extensive and complex set of control strategies due to the magnitude of emission reductions which must be achieved to reach attainment. The South Coast AQMP also includes several innovative alternatives such as its RECLAIM emission trading program, advanced technology measures, and support for market incentive approaches to reduce vehicle emissions. Table 5-4 provides an overview of the diversity of implementation strategies within the region.

TABLE 5-4
IMPLEMENTATION STRATEGIES IN EXISTING AIR QUALITY PLANS

STRATEGY	SOUTH COAST	VENTURA	MOJAVE	IMPERIAL
STRATEGY 1: STATIONARY SOURCES **Reduce emissions from point and area sources.**				
1.1 Fuel Combustion	■	■	■	■
1.2 Waste Burning	■	■		■
1.3 Agricultural Practices	■	■	■	■
1.4 Surface Coating and Solvent Use	■	■	■	■
1.5 Petroleum and Gas Production and Dispensing	■	■	□	■
1.6 Commercial and Industrial Processes	■	■	⊗/□	■
1.7 Construction Practices	■			■
1.8 Other Sources (including controls on fugitive dust and unpaved roads)	⊗/■	■	◊	■
1.9 182(e)(5) Technology Measures	■			
STRATEGY 2: ON-ROAD MOBILE **Reduce emissions from on-road mobile sources (e.g. automobiles, trucks and buses).**				
2.1 Buses	■	■	■	■
2.2 Trucks	■	■	■	■
2.3 Heavy Duty Vehicle Retirement (Scrapping)	■			
2.4 Inspection and Maintenance	■	■	■	■
2.5 Operational Procedures	■	■		
2.6 Alternative/Clean Fuels	■	■		◊
2.7 Automobile Retirement (Scrapping)	■	◊		
2.8 182(e)(5) New Technology Measures	■			
STRATEGY 3: OFF-ROAD MOBILE **Reduce emissions from off-road mobile sources (e.g. ships, planes, trains and other misc. sources).**				
3.1 Marine Vessels	■			
3.2 Aircraft	■			
3.3 Rail	■	■		
3.4 Construction/Farm Equipment	■	■		
3.5 Off-Road Motorcycles	■	■		
3.6 Leaf Blowers	■	■		
STRATEGY 4: TRANSPORTATION INFRASTRUCTURE/PROGRAMS **Reduce vehicle emissions through transportation improvements.**				
4.1 Traffic Flow Improvements (Signal Synchronization and Incident Response)	■	■		■
4.2 High Occupancy Vehicle Facilities	■			
4.3 Rideshare Programs	■	■		
4.4 Transit	■	■		■
4.5 Nonmotorized Strategies	■	■		■
4.6 Park and Ride Lots	■	■		■
4.7 Passenger Rail Improvements	■	■		
STRATEGY 5: ADVANCED TECHNOLOGY MEASURES **Reduce emissions by promoting use of technologies.**				
5.1 Electric Vehicles	■	■		
5.2 Alternative Fueled Vehicles	■	■		◊

TABLE 5-4
IMPLEMENTATION STRATEGIES IN EXISTING AIR QUALITY PLANS

STRATEGY	SOUTH COAST	VENTURA	MOJAVE	IMPERIAL
5.3 Telecommunications	■	■		◊
5.4 Smart Shuttle Transit	■			
5.5 Intelligent Transportation Systems	■	■		
STRATEGY 6: INDIRECT SOURCE CONTROLS **Reduce emissions by reducing the amount of vehicle traffic from indirect sources.**				
6.1 Employee Commute Option (ECO) Programs	■	■		
6.2 Indirect Source Review	⊗	■		
6.3 Special Event Centers	■			
6.4 Shopping Centers	■			
6.5 Registration and Commercial Vehicles	■			
6.6 Airport Ground Access	■			
6.7 Schools	■			
6.8 Enhanced ECO Programs	■			
6.9 Parking Cash-Out	■/⊗			◊
STRATEGY 7: LAND USE STRATEGIES **Reduce emissions by encouraging land uses and design practices which facilitate changes in tripmaking behavior and which will lead to a reduction in vehicle trips and vehicle miles traveled.**				
7.1 Implementation of Congestion Management Program/Land Use Actions		■		■
7.2 Integration of Transit/Land Use		■		■
STRATEGY 8: MARKET STRATEGIES **Reduce emissions through market-based approaches.**				
8.1 Emissions Trading Programs	■			
8.2 Mobile Source Market Incentive Strategies	■/⊗			

Legend:

■= Program(s) to Be Implemented.
⊗= Contingency Measure(s).
◊ = Future Study Measure(s).

55

The FCAA Amendments set new requirements since 1990. The amount of reductions necessary for attainment of air quality standards depends on an area's carrying capacity. Carrying capacity is the amount of emissions which can be emitted into the atmosphere without exceeding the applicable air quality standard. Emission budgets for various sources (on-road mobile, off-road mobile, stationary) are the relative share each source is allowed of the carrying capacity. The greatest focus has been placed on the on-road mobile source emission budget because there is a conformity requirement that transportation projects and programs be consistent with that budget. Table 5-5 summarizes the 1990 emissions baseline, the carrying capacity for each basin, the percentage reduction from the baseline needed to meet federal standards, and the on-road mobile source emission budgets identified in the applicable SIPs in the attainment year.

[55] Based on the most recently prepared plans (1994 SIP submittals).

Table 5-5

AIR EMISSION BASELINE, OZONE CARRYING CAPACITY AND ON-ROAD MOBILE SOURCE EMISSION BUDGETS

AIR BASIN	1990 BASELINE (tons/day)		CARRYING CAPACITY (tons/day)		PERCENT REDUCTION		ON-ROAD MOBILE SOURCE EMISSION BUDGETS BY ATTAINMENT YEAR (tons/day)	
	ROG/VOC	NOX	ROG/VOC	Nox	ROG/VOC	Nox	ROG/VOC	Nox
South Coast	1,517	1,361	323	553	79%	59%	49.2 (2010)	253.6 (2010)
Ventura	87	81	45	40	48%	51%	9.8 (2005)	21.3 (2005)
Southeast Desert - Mojave	46	114	NA*	NA*	NA*	NA*	23.3 (2007)	54.8 (2007)
Southeast Desert - Antelope Valley	35	28	NA*	NA*	NA*	NA*		
Southeast Desert - Coachella Valley	49	44	NA*	NA*	NA*	NA*		
Imperial County	No emission budgets are required because of Imperial's transitional ozone status.							

Source: California Air Resources Board. *The California State Implementation Plan for Ozone, Vol. IV: Local Emission Control Plan and Attainment Demonstrations*. November 15, 1994.

* The carrying capacity for the modified portions of the Southeast Desert Air Basin are not available due to the dominant effect of pollutant transport.

G. AIR QUALITY ISSUES AND STRATEGIES

A number of strategic air quality issues emerged or remain unresolved as a result of the 1994 federal ozone plans and the debate which occurred in the South Coast and Ventura air basins regarding the Federal Implementation Plans.

Based on 1982 air plan submittals deemed inadequate, court action was brought against EPA in both the South Coast and in Ventura County to compel the promulgation of federal implementation plans (FIPs) to bring both areas into compliance with federal air quality standards. On February 15, 1994, draft FIPs were published, with final FIPs promulgated on February 18, 1995. Only the EPA and SCAG argued against imposition of a FIP. During this time, discussions between the State, Congressional leaders, and affected parties within the region clarified that it was not Congress' intent to focus on actions which took place prior to the 1990 Clean Air Act Amendments which updated attainment deadlines and provided for significant revisions in attainment strategies. In April 1995, President Clinton signed a bill eliminating the need to promulgate FIPs for actions which occurred prior to the 1990 CAA Amendments.

Strategic air quality issues can be grouped into five broad categories:

- Planning and Regulatory Streamlining
- Supporting Plan Implementation
- Clean Air and Economic Prosperity
- Supporting Technological Advancement
- Reducing Exposure to Pollution from Inter- and Intra-basin Transport of Pollutants

1. PLANNING AND REGULATORY STREAMLINING

a. State Implementation Plan (SIP) Submittals

Issue: How can the State Implementation Plan (SIP) process to produce an air quality plan be simplified to be more effective and efficient?

Background

The development of the 1994 air plans to demonstrate attainment of federal ozone plans illustrated the need to streamline the plan development and approval process. The simultaneous preparation of the 1994 ozone attainment demonstration plans and federal implementation plans for Ventura and South Coast Air Basin, preceded by sequential plans for individual pollutants, necessitated considerable expenditure of technical, policy and financial resources.[56] Additionally, debate regarding the Federal Implementation Plans created significant uncertainty over the expected emission reductions from federal and state-controlled sources which could be factored into the locally developed plans.

Numerous and complex requirements also establish technical and implementation parameters affecting the flexibility and creativity of approaches which can be utilized to demonstrate attainment. (See Section E "Air Quality Planning Requirements" for specific requirements.) One key example is the ability to include alternatives such as technology and market based approaches to mobile source controls. Despite widespread policy support for such innovative approaches, enforceability and other regulatory requirements challenged the region's creativity in crafting appropriate implementation options. In addition, the requirement that severe and extreme areas include Employee Commute Option (ECO) programs to increase ridesharing among employees of large employers (100+) has also caused concern. Despite growing concern regarding the cost-effectiveness of ridesharing programs as a means of achieving emission reductions, the inclusion of the ECO programs is still required for the attainment demonstrations.[57]

The current federally approved (applicable) SIPs for the region - 1979 AQMP for South Coast Air Basin[58], 1982 AQMP for Ventura, and 1979 SIP for the Southeast Desert - exemplify the difficulty in negotiating the plan approval process. Since approval of these plans, at least two major plan updates have occurred prior to the 1994 ozone plans which have not been formally approved by EPA. This has, in turn, presented the region with questions of how best to address conformity issues, maintain consistency with locally developed policy direction and comply with applicable federal requirements.

[56] 1991 PM10 Plan submittal, a 1991 Air Plan for state purposes, a 1992 NO2 plan, a 1992 Carbon Monoxide Plan (for the South Coast), and a 1993 VOC Rate of Progress demonstration (15 percent plans).

[57] There are currently two bills relating to ECO pending the Governor's signature. SB 437 would prohibit any governmental entity from imposing trip reduction requirements, and SB 722 (Hurtt) would prohibit air districts from mandating trip reduction plans.

[58] The South Coast has partially approved SIPs.

Timely submittal of the federal attainment plans and meeting the mobile source emission budgets are important. If EPA partially approves or disapproves a SIP, federal sanctions can be applied within 18 months of their action[59] EPA can increase new stationary source offset requirements or cause Federal Highway funds to be withheld[60] Both conditions apply if the SIP deficiencies are not corrected within eighteen months. If SIP deficiencies are not corrected within 24 months, EPA must write a Federal Implementation Plan (FIP). SIPs and FIPs are enforceable by citizen suits in federal court[61].

Actions to Be Taken in the Region:

CORE:

- *SCAG will work cooperatively with the region's air districts, CARB and EPA to develop a coordinated game plan to resolve federal/state submission problems and standard differences, and to identify socioeconomic considerations. Local jurisdictions' participation should be sought in the negotiations to resolve conflicting federal and state submittal requirements and ambient air quality standards.* First priority should be given to working out a solution within the context of existing state and federal law. If this is not possible, consideration should be given to modifying federal or state law.

- *SCAG should work with regulatory agencies to integrate requirements to the extent possible, and clarify the roles and responsibilities of regulatory agencies, and thereby improve local government's ability to first understand its options, choose from them, and then act accordingly.*

ANCILLARY:

- Responsible agencies within the region should work to minimize the number of overlapping and/or conflicting requirements for complying with the statutes.

- The State's portion of the State Implementation Plans and the locally developed air quality management/ attainment plans should be closely coordinated. If necessary, federal, state, regional and local policy makers should be convened to assure that plan submittals and standards are agreed to by all parties.

- SCAG should work with other regional agencies having air quality implementation responsibilities to: 1) support legislation which makes funding available for local governments to implement the provisions contained in their respective agreements for reducing pollutant emissions; and 2) facilitate a coordinated approach to air quality implementation actions taken by local governments.

- Promote the refinement/expansion of section 182(e)(5) of the FCAA[62] which pertains to extreme areas, to not only include new technologies, but also to allow the use of existing technology and systems not yet implementable or practical, and the development of other programs (i.e., pricing or innovative proposals)

[59] 42 U.S.C. §7509
[60] 42 U.S.C. §7509(b)(1)-(b)(2).
[61] 42 U.S.C. §7604.
[62] 42 U.S.C. §7511a(e)(5).

without having to have rules and regulations in place at the time of plan approval.

- Enhance the region's ability to use non-regulatory command and control approaches such as market incentives and technological advancements in addition to those allowed in the South Coast Air Basin to implement air plan programs.

b. Potential Freight Movement Impacts from Changing Air Standards

Issue: How can the region best respond to freight movement impacts from potential changes to ambient air quality standards?

Background

National primary ambient air quality standards are based on a level of air quality necessary to protect public health with an adequate margin of safety. The timeframe for attaining the standards is based on the severity of an existing nonattainment problem. National secondary standards are established to protect the public welfare from any known or anticipated adverse effect from a pollutant within a "reasonable time" after EPA approves an implementation plan. More stringent state ambient air quality standards have also been established.

Particulate matter of 10 microns or less in size (PM10) constitutes a risk to human health because of its effects on the pulmonary and respiratory systems and have therefore been established as a national ambient standard. Particulate matter derives from man-made and natural sources, as well as several processes that produce chemical precursors that form particulates in the atmosphere. All of these contribute to the PM problem. Primary sources of PM include road dust, diesel soot, combustion products and naturally occurring small particulates. Complex reactions between sulfur oxides, nitrogen oxides and volatile organic compounds produce nitrates, sulfates and complex carbon compounds which also contribute to the PM problem.

The EPA is currently in the process of reexamining the health impacts of particulate matter - and the associated air quality standards - in response to court action brought by the American Lung Association. Based on new research and information developed in response to the law suit, EPA is considering promulgation of an additional PM2.5 standard by January 31, 1997.

Four of the six air quality areas in the region currently fail to meet federal PM10 standards. In the Coachella Valley, Imperial County, and the Mojave Desert AQMD area, attainment of the PM10 standard appears to be possible by minimizing locally generated dust through actions such as construction management practices, paving unpaved roads, and fugitive dust controls.

In the South Coast Air Basin, however, secondary particulates formed from photochemical reactions comprise 40 percent of the particulate matter and play a significant role in nonattainment. PM10 Attainment Demonstrations for the South Coast Air Basin and the Coachella Valley are required to be submitted to the EPA by February 8, 1997. Significant challenges will face air districts and the region. Preliminary indications are that attainment of the PM10 standard by 2001 as required by statute for a serious nonattainment areas will not be possible.[63] The

[63] 1994 AQMP, Appendix I-D.

Clean Air Act provides for a five year extension to attain PM10 standards, which the South Coast Air Quality Management District intends to apply for. As sources of particulate matter and its precursors are identified, additional strategies to reduce emissions will need to be developed. EPA guidance also requires that TCMs be included in areas where mobile sources contribute significantly to exceeding the federal PM10 standard.

Further, as a result of the anticipated PM2.5 standard, measures which affect the transportation system are likely to undergo intense scrutiny[64]. In particular, curbing fine particulates from such sources as diesel engines and other NOX emitting sources such as freight movement vehicles (trucks, trains, planes and ships) and construction equipment (bulldozers, cranes, etc.) is likely to undergo considerable debate. As international sources, ships would be difficult to regulate at the local, state, or national level because of enforcement issues. Furthermore, issues arise regarding the potential diversion of cargo from the San Pedro Bay ports.[65]

Actions to Be Taken in the Region:

CORE:

- *Work to implement consensus-based approaches to emission reductions from goods movement sources, using the goods movement task force process, studies, and recommendations advocated by SCAG in the 1994 South Coast AQMP (Appendix IV-C).*

ANCILLARY:

- Advocate the promulgation of national standards and international standards (when appropriate) for sources whose movement extends beyond local air basin and regional boundaries (e.g., locomotives, airplanes, ships, and trucks).

- Support the use of cost-benefit analysis as a criterion in establishing standards and/or their attainment dates.

- Closely monitor, and actively participate when applicable, in the national debate on a new PM2.5 standard, as well as any changes to existing standards.

- Recommend the promulgation of international PM standards for ships through the International Maritime Organization because the vast majority of ships calling at the Ports of Long Beach and Los Angeles (San Pedro Bay ports) are registered in foreign countries.

- Support the continued use of negotiated rulemaking. This federal process brings together regulators and affected parties to work cooperatively to craft a rule from the start of the process.

- Support achieving emission reductions from freight movement sources which occur in the most feasible and cost-effective manner, without causing an adverse modal shift (i.e., from rail to other, more polluting modes) and without negative economic consequences.

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[64] U.S. Environmental Protection Agency. "PM10 Serious Area SIP Guidance: Final Staff Work Product." Memo from Joseph W. Paisie, September 24, 1993, Office of Air Quality Planning and Standards, Research Triangle Park, NC.

[65] As stated in July 29, 1995 letter from POLB to SCAG.

- Support the completion of research and development activities necessary to identify additional freight movement technology strategies, feasibility of consolidation projects, and assessment of economic, air quality and congestion impacts that would result from a defined set of alternative goods movement strategies.

- Support federal responsibility and accountability in regulating sources uniquely under federal control.

c. Streamlining the Conformity Process

Issue: What recommendations can the region make to help streamline the conformity process?

Background

A strong linkage between the Clean Air and Intermodal Surface Transportation Efficiency Acts[66] exists through the conformity process because of the need to ensure that projects and programs are being implemented in a timely manner, that they are financially constrained, and that they are consistent with the emissions budgets (amount of emissions that are allowed) identified for mobile sources in the applicable air plans. Conformity findings are assessed by air basin, or its subareas in the case of the modified portion of the Southeast Desert Air Basin. In the event that conformity cannot be found, federal funding for transportation projects may be withheld for the specific air basin or Mojave subarea.

Withholding transportation funds by the federal government - either through lapsing of a conformity finding or through the imposition of sanctions - presents the potential for significant adverse economic effects to the region because of lost or delayed opportunities for transportation investments. Varying air plan submittal timelines and approval cycles combined with differing penalty timeframes frequently obscure the status of penalty imposition.

Actions to Be Taken in the Region:

CORE:

- *Work with local, state, and federal agencies to streamline the conformity process and eliminate or revise provisions that are unworkable or of questionable value for ensuring conformity with the purpose of the SIP as required by Section 176(c) of the FCAA.*

- *Encourage local participation with SCAG in the consensus processes regarding conformity processes through SCAG's Transportation Conformity Working Group and the Modeling Task Force.*

- *Promote agreement in timing of requirements and sanctions.*

[66] 23 U.S.C. §§101 et seq.

d. Streamlining Air District Regulations and Requirements

Issue: **How can local air districts streamline their rules and regulations, and minimize unnecessary bureaucratic requirements?**

Background

Air districts play one of the most critical roles at the local level in interpreting and implementing requirements to attain air standards. They are also highly visible in their interactions with the regulated community and the public. Although significant efforts have been undertaken by each of the air districts in the region to help streamline their processes, additional measures may assist in providing for a business-friendly regulatory environment while protecting public health.

Discussion regarding alternative means of implementing control measures has also emerged. The use of Stage I and Stage II episode measures, which would be implemented only in the event of a forecasted exceeding of air quality standards, are examples of this concept.

Actions to Be Taken in the Region:

ANCILLARY:

- SCAG should support air districts and the California Air Resources Board in their efforts to enhance their programs to facilitate regulatory compliance, business retention and small business assistance. Special consideration should be given to further streamlining permit processing protocols and achieving air quality objectives in an increasingly efficient manner.

- SCAG should support air districts and the California Air Resources Board in their efforts to work together to develop more coordinated approaches, including parallel rules and regulations. This can help to minimize the adverse impacts on businesses, industries and local governments. It can also work toward leveling the playing field throughout the SCAG region.

- Support subregional efforts to examine institutional arrangements to maximize effectiveness in meeting air standards. For example, the North Los Angeles County subregion intends to continue to pursue investigation of whether and how to change the existing air quality jurisdictional arrangement for North Los Angeles County.

- Support local efforts to enhance regulatory efficacy while minimizing bureaucratic requirements.

- SCAG should support and work cooperatively with the air districts and others to help streamline the requirements placed on the local districts by the CARB and EPA so that local regulations can, in turn, be streamlined.

- SCAG should encourage subregional input and participate in efforts by the air districts and CARB to examine the potential for temporal, geographic and spatial controls as alternative means to facilitate implementation of transportation controls.

e. Alternatives to Command and Control Regulation

Issue: How can the implementation of alternatives to command and control regulation be encouraged?

Background

Regulation can either directly mandate the schedule, necessary equipment, emissions level and types of actions necessary to provide emission reductions, or it can serve as a flexible framework which provides a benchmark around which appropriate actions can be developed. Until recently, direct mandates, or command and control approaches to regulation, have been the primary means accepted to comply with clean air requirements in both federal and state statutes. Increasingly, alternatives to this approach have been introduced. These include: promotion of advanced technologies; market based strategies such as the South Coast Air Quality Management District's RECLAIM emission credit trading program; and technology options for regulatory compliance such as the use of remote sensing equipment in lieu of employer rideshare plans.

A particularly innovative approach to encourage crediting local actions which benefit air quality is the inclusion of provisions which would permit locally developed alternatives to regulation such as the substitution and delegation process in the South Coast AQMP. This approach provides local jurisdictions and/or subregions with the option to directly take on responsibility for air district indirect source rules, or to prepare and implement local plans which would be substituted in place of the rules. This approach relies upon determining a fair and equitable means of apportioning emission reduction targets to subregions which reflect an appropriate share of the emission reductions necessary to be within the mobile source emission budget.

SCAG and the South Coast Air Quality Management District have continued collaboration in developing a market incentive strategy through the formation of Reduce Emissions and Congestion on Highways (REACH). In cooperation with transportation, regulatory, environmental and business partners, the two agencies seek to develop an implementation strategy for market-based measures.

Actions to Be Taken in the Region:

CORE:

- *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community-based shuttle services, provision of demand management based programs, or VMT/emission fees) so that options to command and control regulation can be assessed.*

ANCILLARY:

- Identify specific implementation conditions for alternatives identified (e.g., funding, implementation processes, potential impacts).

- Balance strict legal enforceability requirements with other implementation factors.

- Include provisions, where appropriate, to encourage the implementation of locally developed alternatives to regulation. An example is the substitution/delegation process included in the 1994 South Coast AQMP which encourages one or more local governments to develop and implement creative alternatives to indirect source rules. Development of emissions targets is crucial to this effort.

- SCAG, air districts and CARB should support the development and implementation of fair share approaches to mobile source emission reductions, including market based strategies such as pricing, service delivery approaches, and mobile source emission credit trading.

- Continue to identify, assess and implement market based means of achieving emission reductions through collaborative efforts such as REACH.

2. SUPPORTING CONTINUED PLAN IMPLEMENTATION

a. Development and Implementation of Technologies

Issue: How can continued progress be made in developing and implementing new technologies which are critical to the region's attainment demonstration?

Background

The state's low emission vehicle/zero emission vehicle mandates[67] form a cornerstone for much of the mobile source emission reductions anticipated in the region. Additional emission reductions from advanced technologies are also relied upon in the South Coast to reach attainment. In the policy debate surrounding the development and adoption of the 1994 Air Quality Plans to demonstrate attainment of ozone standards and the Federal Implementation Plans, conscious choices were made to promote technological advancement rather than behavior controls such as employer rideshare programs.

Despite the state's reaffirmation of the LEV/ZEV mandates, and the strong support within the region to advance technologies, significant questions regarding implementation of technological advancement remain. Vehicle manufacturers have expressed concerns as to whether a market will exist for the number of vehicles mandated to be low-emission/zero-emission. Of particular concern is whether or not consumers will purchase electric vehicles which presently cost more to produce and have significantly smaller travel ranges than traditional gasoline-powered vehicles. For the past year and a half, SCAG has submitted testimony and briefs in the LEV/ZEV case currently being heard by the California Public Utilities Commission[68] as to whether Southern California Edison, Southern California Gas, and other utilities in California should be allowed to develop LEV/ZEV infrastructure. SCAG has consistently argued that utility involvement in the development of infrastructure is essential to achieving the LEV and ZEV market penetration goals called for by the South Coast AQMP *and SCAG's own*

[67] Beginning in 1998, two percent of all vehicles offered for sale must be zero-emission vehicles. By 2003, ten percent of vehicles for sale must be zero-emission vehicles.

[68] Case I. 91-10-029 and related proceedings.

Regional Transportation Plan (CORE).

Infrastructure availability also remains a barrier. Recent filings by the Southern California Gas Company before the Public Utilities Commission revises substantially downward its market forecast of natural gas vehicles (-73.7%), gas throughput (-59.2%) and the number of systemwide refueling stations (56.5%)[69]. In addition, infrastructure for electric vehicles has just begun to emerge. The Electric Vehicle cluster of the Southern California Economic Partnership has been working to prepare a model building code which would provide a common standards for electric vehicle charging infrastructure.

Despite these concerns, the District of Columbia and twelve states in the Northeast have worked together as the Ozone Transport Commission to bring low emission/zero emission vehicles to that area. When combined with California, significant market potential for these alternatively fueled vehicles has begun to emerge.

Funding levels for research, development and implementation of technologies is also of concern. Budget cuts at both the federal and state levels have threatened the amount of funding available for energy and transportation technologies. Alternative uses for local AB2766 funds[70] have also been raised. Overall, the fiscal climate facing technology implementation is one of preserving rather than enhancing funding.

Actions to Be Taken in the Region:

ANCILLARY:

- Maintain proactive support for the California LEV/ZEV mandate and other efforts to enhance technological advancement because of the essential role such advances play in demonstrating attainment, improving mobility and enhancing Southern California's economy.

- Work to identify potential new sources of funding and preserve existing ones for technologies in cooperation with the state, local air districts, subregional organizations, local governments and the private sector.

- Enhance coordination and cooperative actions in working with the Northeast Ozone Transport Commission to increase the potential marketplace for low and zero emission vehicles.

b. Accelerated Vehicle Retirement (Scrapping)

Issue: How can vehicle retirement programs best complement efforts to increase market penetration of alternatively fueled vehicles?

Background

[69] Letter dated June 6, 1995 to Daniel W. Fessler, President, California Public Utilities Commission from Warren Mitchell, President, Southern California Gas Company.

[70] This bill authorized a vehicle registration fee up to $4 to be used by local air districts and (in the South Coast) local governments, and a discretionary program to fund programs which would reduce emissions from mobile sources.

In the 1994 State Implementation Plan, the Air Resources Board included two measures to substantially increase the rate at which older, more polluting vehicles would retire from the vehicle fleet: Measure M1 (Accelerated Retirement of Light Duty Vehicles) and M7 (Accelerated Retirement of On-Road Heavy Duty Diesel Trucks). By providing financial incentives, the voluntary retirement of the specific vehicles would occur. While these measures apply specifically to the South Coast Air Basin, it would also serve as a possible demonstration program for other parts of the state. Both programs require legislative authorization to implement. One of the most critical issues facing the programs is the source of funding which would be used to provide the monetary incentives. Potential options include instituting new fees, reallocating existing funding mechanisms, or a combination of both.

Initial experience with small scale demonstration programs indicate success in reducing emissions cost-effectively in the short-term. Whether these emission reductions and program cost-effectiveness can be sustained is unclear, however, since wide scale implementation of accelerated vehicle retirement programs has not been tested.

While accelerated vehicle retirement is intended to reduce the number of older, more polluting vehicles from the vehicle fleet, emissions from replacement vehicles are also important. The cleaner the replacement vehicles, the more effective and efficient the accelerated vehicle retirement program becomes. Thus, the complementary, rather than competitive nature, of vehicle retirement and accelerated clean fuel fleet deployment strategies becomes important.

Actions to Be Taken in the Region:

ANCILLARY:

- Support the preservation of existing funding sources for local governments to implement air quality improvements and exploration of new funding sources to implement new programs.

- Support the on-going evaluation of emission reduction benefits, program costs and voluntary retirement rates for the vehicle scrapping programs.

- Identify innovative programs which could more closely link the retirement of older, more polluting vehicles from the vehicle fleet while encouraging the enhanced market penetration of clean fueled vehicles.

c. Transportation Infrastructure and Program Control Measures

Issue: How can the region best ensure continued funding for transportation infrastructure improvements which improve air quality?

Background

Transportation infrastructure based actions such as programs for buses, high-occupancy vehicle lanes, rail, traffic flow improvements and bicycle lanes are each included as reasonably available TCMs in the CAA. As

noted in Table 5-3, many of the region's air quality plans contain these measures as part of the attainment demonstrations.

These infrastructure measures are funded through the Transportation Improvement Plan (TIP) process. New funding shortfalls resulting from budget cuts at the federal and state levels in addition to decreases in local sales tax revenues have significant implications for the implementation level and schedules identified in the attainment demonstrations. Finding conformity between the applicable SIP and a proposed TIP and/or Regional Transportation Plan thus can become more problematic. (CORE)

Actions to Be Taken in the Region:

CORE:

- *Ensure through the TIP and conformity processes that funding priority for transportation measures identified in the attainment plans are adhered to in local decision making. In addition, support recognition of these priorities in the federal and state transportation appropriation processes.*

- *Work to ensure that those infrastructure projects and transportation programs identified as TCMs in the SIP are not sanctioned or withheld in the event sanctions are imposed.*

ANCILLARY:

- Support the use of a flexible reasonable further progress process which tracks project implementation.

d. Employer Rideshare Programs

Issue: How best can the region address changes to Employer Commute Option (ECO) programs to enhance air quality benefits and reduce employer costs?

Background

Employer Commute Option (ECO) programs are required by the FCAA[71] for severe and extreme ozone nonattainment areas. Programs such as the South Coast Air Quality Management District's Rule 1501 (Regulation XV, now Rule 2202) and Ventura County's Rule 210 are intended to satisfy this requirement. As implementation experience has been gathered over the past several years, the relative cost-effectiveness of requiring employers to offer increasing programs to employees to encourage them to rideshare voluntarily has come under intense scrutiny within the region and nationally.

In response to such concerns, the South Coast Air Quality Management District adopted revisions to Rule 1501 which permit employers to use alternative means of achieving emission reductions such as remote sensing,

[71] 42 U.S.C.§7511a

vehicle retirement and contributing to an air quality investment fund.[72]

Actions to Be Taken in the Region:

ANCILLARY:

- Support continued air district efforts, with employer involvement, to streamline implementation requirements and support the use of alternatives to achieve emission reductions.

- Support increased flexibility in both federal and state requirements which would permit the use of alternatives to rideshare plans.

- Continue to evaluate the cost-effectiveness of employer based air quality programs.

3. CLEAN AIR AND ECONOMIC PROSPERITY

a. Improving Air Quality and the Economy

Issue: How and to what extent can advances in meeting air quality standards be made that enhance local and regional economic conditions?

Background

Decisions made by people and businesses to locate or stay in an area are influenced by many factors. They include among them: regional and local business climate, work force competitiveness, infrastructure availability and quality of life. The role that air quality and regulatory considerations play in influencing these factors is also a strong topic of debate in the region as additional air emission reductions become increasingly more difficult and costly to achieve. Regionally, as across the nation, the recent trend has been to place greater emphasis on job creation and retention.

As noted in the Economic Chapter of the Regional Comprehensive Plan and Guide, efforts to enhance the market for environmental and advanced technology goods and revenues have the potential for significant economic gain. Proactive efforts must be made, however, to foster these markets.

Actions to Be Taken in the Region:

CORE:

- *SCAG and the region's air districts should continue to maintain Memoranda of Understanding detailing cooperative planning relationships and requiring that regional growth forecasts be used in the development of*

[72] There are currently two bills relating to ECO pending the Governor's signature. SB 437 would prohibit any governmental entity from imposing trip reduction requirements, and SB 722 (Hurtt) would prohibit air districts from mandating trip reduction plans.

all air district plans.

ANCILLARY:

- Encourage the region's air districts to pursue an approach which improves both air quality and the economy. This approach should seek an effective balance between command and control, and market strategies (e.g. the SCAQMD's job retention program).

- SCAG and the air districts should seek legislative actions at the state and federal levels to remove or replace costly and ineffective measures with those that are flexible and sensitive to the local economy, and which achieve equivalent emission reductions.

- Streamlining regulatory requirements should be a high priority.

- SCAG and the air districts should actively promote and support energy efficiency and conservation measures and programs in the region to reduce air pollutant emissions.

- SCAG and the air districts should actively promote and support pollution prevention measures and programs in the region to reduce air pollutant emissions.

- In the process of seeking to improve air quality and the economy, SCAG shall encourage air districts to:

    - Continue to explore new control measures to comply with current mandates, while continuing to make assistance available to businesses. Such methods should be shared among districts.

    - Continue to explore the positive and negative impacts of air quality programs on the economy, documenting and sharing the results of that effort among districts in the region.

    - Continue to develop and refine, through policy groups like the TCM Policy Committee, proposed market incentive techniques, pricing incentives, vehicle registration fees to benefit air quality, and implementation prototypes for congestion and emission fees.

    - Continue to promote and support the creation of new industries and products required to achieve cleaner air. Examples of this ongoing effort by SCAQMD's Technology Advancement Office include: "Living Machine" biofilter unit; low pollution hot water heater; near-zero emission fuel cell battery hybrid transit bus; and, methanol and natural gas heavy duty construction vehicles.

    - Continue to promote efforts which both improve air quality and promote economic development in consultation with business and industry groups such as: development of environmental protection technology, and advanced transportation technologies industries; facilitate the creation of an electric vehicle industry (CALSTART) and new advanced transportation systems and technology industries (Project California); and development of public-private joint ventures, like a Regional Economic Strategies Consortium and "Project Southern California" linking employment needs with transportation requirements in the SCAG Region.

- Support actions to facilitate the locating of "clean industries" in the region, like the efforts of SCAQMD to identify existing clean industries, better understand the economic benefits of clean industries, and the development of incentives to facilitate the location of clean industries in the region.

- SCAG and the air districts should continue to involve private sector interests in working groups, committees, public workshops and in all other phases of the decision making process. Additionally, efforts should be made to provide greater knowledge and streamlining of the regulatory processes such as the SCAQMD's "New Directions".

- Cal EPA, CARB and EPA should continue to have early involvement in the air quality plan development process to enable them to better understand and respond to economic considerations.

- The region should consider the implementation of certain transportation-related measures at the regional and subregion levels to minimize unequal economic impacts on business and local governments.

- Encourage air districts in their regulatory development process to continue to identify and implement control strategies that would not restrict economic growth and local control.

- SCAG and air districts should continue to document and disseminate case studies where actions taken for air quality purposes are also beneficial for economic development.

b. Air Quality, Land Use, Transportation and Economic Relationships

Issue: How can air quality considerations be more consistently taken into account in land use, transportation and economic decisions?

Background

As the region's population grows to 20.5 million people by the year 2010, ambient air quality will be impacted by decisions made regarding land use, economic growth, and transportation infrastructure needs. Taking air quality considerations into account when these decisions are made has the potential to positively affect not only air quality, but mobility, growth and economic development. Local efforts to foster liveable communities and support non-motorized travel modes are one example of such synergies. In addition, transportation infrastructure improvements such as high-occupancy vehicles lanes, transit/smart shuttles, and rideshare services can positively affect both air quality and mobility while providing opportunities for economic benefits. Commensurately, advanced transportation technologies such as electric vehicles, alternative fuel vehicles, telecommunications technologies, intelligent transportation systems, and smart shuttle transit have the potential to spur economic development in the region while accruing air quality benefits.

Local governments are uniquely qualified to address land use issues. Supporting efforts to incorporate air quality factors is thus an important role which local governments can address in their decision making and California Environmental Quality Act (CEQA)[73] analyses.

[73]Cal. Pub. Res. Code §§2100 et seq.

Actions to Be Taken in the Region:

CORE:

- *Through its environmental document review process[74], SCAG should help ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

ANCILLARY:

- SCAG and the air districts should continue their efforts to provide guidance to local governments by developing a handbook, with local government input, for voluntary use by local governments on ways to support land use, transportation and economic development while providing positive air quality impacts.

- SCAG, air districts and CARB should support mechanisms that acknowledge the benefit of voluntary implementation of land use and transportation actions which improve air quality.

- SCAG should encourage cities and counties in the region to take air quality and energy efficiency/conservation into consideration in their land use and transportation planning and decision making.

- SCAG should encourage voluntary land use development patterns and project designs and features that minimize motor vehicle trips.

4. SUPPORTING TECHNOLOGICAL ADVANCEMENT

a. Technological Advancement

Issue: How can the region support the development and implementation of advanced transportation technologies to improve air quality?

Background

Implementation of new technologies and alternative fuels form a cornerstone of the clean air strategies for each of the nonattainment areas within the region. Throughout the state, the Air Resources Board includes provisions for increased penetration of low emission vehicles and zero emission vehicles into the vehicle fleet, improved emission controls on new vehicles, and reformulated fuels.

In the South Coast Air Basin, advanced transportation technologies and other technological advancements are critical to demonstrate attainment of air quality standards. Measures are included which focus on developing deployment strategies for advanced transportation technologies to facilitate favorable market conditions. Measures to promote the market penetration of zero emission and alternative fuel vehicles, telecommunications,

[74] *Mandated by Executive Order 12,372 (replacing A-95 review) and Cal. Pub. Res. Code §21092.4(a).*

smart shuttle transit and intelligent vehicle highway systems are also included.

Section 182(e)(5) of the FCAA provides for the inclusion of emerging technologies not fully developed for commercial use as part of the attainment demonstration in extreme areas (i.e., the South Coast). Fuel cells, hydrogen engines and fly-wheel batteries are examples of these technologies. These measures must, however, have alternative measures which could serve in their place should the anticipated emission reductions fail to occur.

Several implementation strategies have evolved to assist in furthering advanced technology development and implementation. These include the formation of collaborative public/private partnerships such as the Partnership) and CALSTART. This concept is predicated on active public/private partnerships formed to shape initiatives to identify, develop and market advanced technologies. Close partnerships with organizations and programs dedicated to economic revitalization and new transportation technologies are also being established and expanded to foster a synergy between transportation, air quality and economic development.

The Partnership is a non-profit organization with a Board of Directors comprised of high-level business and government officials, as well as SCAG, SCAQMD, and County Transportation Commission (CTC) representation, who provide overall policy guidance to the entire organization. The Partnership works with industry cluster groups, cities and counties in a supportive and facilitating capacity to ensure development of advanced transportation technology measures.

The South Coast Air Quality Management District's RECLAIM emission trading program also provides an incentive to encourage technological advancement. By investing in highly efficient emission reducing technologies, a valuable financial commodity can be created from excess emission reduction credits. On a more local level, programs such as the Department of Energy's Clean Cities program and the Clean Cities cluster of the Partnership support and encourage local government supporting actions. Fleet purchases, permitting/provision of refueling stations, and common building codes to permit electric vehicle charging stations are all examples of actions local governments can take.

Actions to Be Taken in the Region:

ANCILLARY:

- Promote the use of market based means to facilitate technological advancement and enhance penetration of these technologies into the marketplace.

- Encourage local governments to participate in Clean Cities programs to join together in collaborative partnerships to achieve cost savings in developing and implementing clean air strategies.

- Assist local governments in obtaining Clean Cities designation by helping coordinate the preparation of implementation plans and supporting subregional coordination efforts

- Facilitate funding, technical assistance, partnership formation, and general encouragement of the technology advancement efforts. Each air district is encouraged to develop its own unique approaches to working with the diverse special interests in their area.

b. Public/Private Partnerships as an Implementation Strategy

Issue: How can both the public and private sector team work together to facilitate improving air quality, enhancing mobility, conserving energy, and providing for a dynamic healthy economy?

As implementation experience has been gained, collaborative partnerships between the public and private sector have proven effective in facilitating implementation of air quality strategies while maintaining sensitivity to economic factors. The partnership between the Orange County Private Sector Task Force and the Regional Advisory and Planning Council in addressing the development of the 1994 AQMP for the South Coast exemplifies how policy coalitions can be built to address both public and private sector concerns. Similarly the collaboration between the Ventura County Economic Development Association and Coalition for Economic Vitality created by the Ventura County Board of Supervisors, formed an effective partnership to address the County's concerns regarding its Federal Implementation Plan.

Actions to Be Taken in the Region:

CORE:

- *Actively reach out to both private and public sectors to assist in the development of approaches, formation of implementation strategies and identification of fiscal resources to help achieve implementation.*

ANCILLARY:

- Continue to promote efforts by SCAG and local air districts to facilitate the development of public/private partnerships to help implement air quality improvement plans.

- Encourage private sector participants to become more involved in working groups such as SCAG's Regional Advisory Council (RAC), the SCAQMD's working groups and similar forums at the local level to help assure business, industry and environmental concerns are reflected in the air quality planning and regulatory process.

5. INTER AND INTRA-BASIN TRANSPORT OF POLLUTANTS - REDUCING EXPOSURE TO POLLUTION

a. Coordination to Deal With Interbasin and Intrabasin Pollutant Transport

Issue: How can the problem of interbasin and intrabasin pollutant transport be dealt with more efficiently and fairly to reduce exposure to pollution for everyone?

The complex interaction of wind patterns, photochemical reactions and the region's geography contributes to the transport and distribution of air pollutants. In the Mojave Desert, Antelope Valley and Coachella Valley portions of the Southeast Desert Air Basin, ozone transport from the South Coast Air Basin contributes substantially to those areas' non-attainment status. Thus, attainment of air quality standards in these areas is dependent on successful implementation of controls within the South Coast Air Basin. For this reason, CARB staff has supported federal waivers of the post-1996 rate of progress requirements for these areas. In addition, mutual transport between Ventura and South Coast Air Basin occurs.

Ozone transport issues also exist in Imperial County. Preliminary evidence points toward transport from both the South Coast Air Basin and the City of Mexicali, Mexico situated immediately across the international border. Collaborative efforts between the Imperial County APCD and CARB have begun to gather data to more clearly delineate the nature and extent of the transport issue.

When classifying the non-attainment status of an area, the degree to which pollutant transport contributes to the problem is not considered. Thus, many areas such as the modified portions of the Southeast Desert are responsible for implementing strategies which may bear little correlation to the nature of the non-attainment problem. For example, federal requirements to implement Employee Commute Option programs and other transportation controls to reduce vehicle trips and vehicle miles traveled may have little or no impact in reducing emissions.

Actions to Be Taken in the Region:

ANCILLARY:

- SCAG should work collaboratively and support efforts of local air districts in gaining assistance in monitoring and modeling from CARB to better define the source and amount of transported pollution and the meteorological conditions which affect transport in order to refine control strategies in both source and receptor areas.

- SCAG should continue to work cooperatively with local air districts and CARB on technical and policy body coordination mechanisms to facilitate defining the source and amount of transported pollutants, and to arrive at mutually responsive control strategies.

- SCAG, subregions and local governments should work cooperatively with air districts wherein significant intrabasin pollutant transport controversies exist to develop a clearer understanding of emissions transport and control strategies.

- EPA and CARB should continue to work cooperatively to assess the pollutant transport impact on Imperial County from Mexico and help Imperial County Air Pollution Control Districts and Mexican air pollution officials develop effective control strategies.

- SCAG should support local air district and subregional efforts to better correlate proportions of local air quality emission reductions and the emission reductions to be achieved from decreased pollutant transport.